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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,536	08/22/2001	William K. Zuravleff	0011-053	8704

7590

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EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,536

Applicant(s)

ZURAVLEFF, WILLIAM K.

Examiner

Tarifur R Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 8, 13, 15, 19 and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Matsukawa et al., (Matsukawa), USPAT 4,874,227.**
4. Matsukawa discloses and shows in Fig. 13, an LCD array having a plurality of imaging surfaces (11) arranged in rows and columns with gaps there between, an improvement comprising:

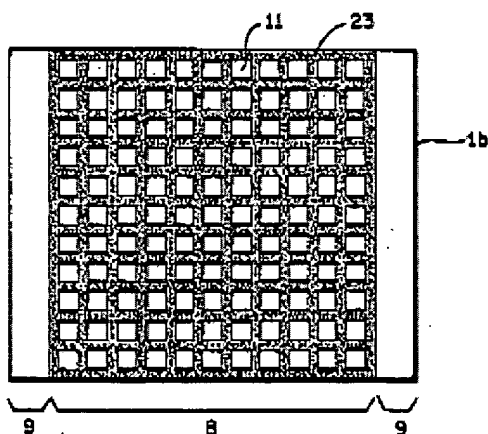


FIG. 13

a plurality of horizontal traces (23) and a plurality of vertical traces (23) arranged

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such that the gaps are generally underlain by the traces such that light passing through the gaps is blocked by the traces (col. 5, lines 59-66).

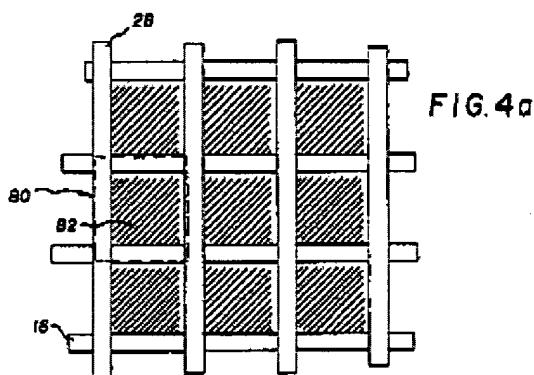
Further, since the method for blocking light in an LCD array is merely a list for forming each component and each component must be formed to make the device, the method would be inherent to the device.

Accordingly, claims 8, 15, 19 and 20 are anticipated.

As to claims 13, Matsukawa shows in Fig. 13 that the plurality of traces (23) generally blocks all of the gaps.

5. Claims 8-11, 13-17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Stephenson, USPAT 6,025,952.

6. Stephenson discloses and shows in Fig. 4a, an LCD array having a plurality of imaging surfaces (80) arranged in rows and columns with gaps there between, an improvement comprising:



a plurality of traces (16, 28) arranged such that the gaps are generally underlain by the traces such that light passing through the gaps is blocked by the traces (col. 5, lines 23-27);

Accordingly, claims 8 and 13 are anticipated.

As to claim 10, Stephenson also discloses and shows in Fig. 4a that at least some of the gaps which are positioned in a first direction are underlain by a first plurality of traces on a first metal layer and at least some of the gaps which are positioned in a second direction are underlain by a second plurality of the traces on a second metal layer (col. 5, lines 24-26);

As to claim 11, it is clear from Fig. 4a of Stephenson that the first direction is perpendicular to the second direction.

As to claims 15 and 20, since the method of blocking light in an LCD array is merely a list for forming each component and each component must be formed to make the device, the method would be inherent to the device.

As to claims 9 and 17, Stephenson discloses and shows in Fig. 3 that the traces carry power for the LCD array (col. 5, lines 10-15).

As to claims 14 and 19, Stephenson shows in Fig. 4a that the first direction is horizontal direction and the second direction is vertical direction.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-7, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephenson as applied to claims 8-11, 13-17, 19 and 20 above.**

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9. As to claims 1-3, 12 and 18, Stephenson discloses all the limitations as claimed except that the imaging surfaces are mirror surfaces. However, it is common and known in the art to use reflective pixel electrodes to obtain a reflective display. Further, it is also known in the art that the reflective pixel electrodes have mirror surfaces. Therefore, it would have at least been obvious to one of ordinary skill in the art at the time of the invention was made to modify the LCD array of Stephenson such that use reflective pixel electrodes (mirror surfaces) so that a reflective display is obtained.

Accordingly, claims 1-3, 12 and 18 would have been obvious.

As to claims 4-7, Stephenson shows in Fig. 3 that that the plurality of power traces includes a plurality of first voltage traces, and a plurality of second voltage traces. As to positioning the first voltage traces and the second voltage traces in alternate fashion is common and known in the art and thus would have been obvious to avail a proven technique.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) USPAT 6,476,563 shows in Fig. 1 that the horizontal gaps and the vertical gaps between the imaging surfaces filled by ITO.

b) USPAT 5,767,936 discloses a liquid crystal device having an L shape image reading element in a gap between display pixels.

c) USPAT 5,808,719 discloses a liquid crystal display device wherein a black matrix is formed to surround each picture element.

d) USPAT 5,953,088 is related to a liquid crystal display wherein shield electrodes are arranged to alternately overlap adjacent pixel electrodes.

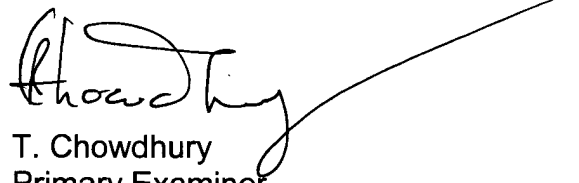
e) USPAT 6,392,734 discloses double metal pixel array for silicon LC light valve featuring shielded inter-pixel isolation regions.

USPAT 5,331,447 discloses a liquid crystal display device wherein light shielding films are formed between the divided pixel electrodes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 305-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



T. Chowdhury
Primary Examiner
Technology Center 2800

TRC
April 10, 2003